



**COMMITTEE ON ACADEMIC PLANNING AND REVIEW
ANNUAL PROGRAM REPORT**

College	CoS
Department	Engineering
Program Unit	Computer Engineering, Engineering Management and Industrial Engineering
Reporting for Academic Year	2014-2015
Department Chair	Saeid Motavalli
Date Submitted	10/14/2015

1. SELF-STUDY (about 1 page)

A. Five-year Review Planning Goals

The Engineering Department offers two undergraduate engineering degree programs, Computer Engineering and Industrial Engineering. We also offer one graduate degree program in Engineering Management. The Industrial Engineering degree program is accredited by the Accreditation Board for Engineering and Technology (ABET). Computer Engineering is the newest engineering major which we started in 2007. We had our initial accreditation visit for Computer Engineering and reaccreditation of Industrial program Last October. We get the accreditation results by July 2015.

B. Five-year Review Planning Goals Progress

1. Continue the assessment and evaluation process for continuous improvement of the programs.
2. A new faculty has joined the Computer Engineering program this fall. This has increase the Computer Engineering faculty to 3, which is the minimum requirement for accreditation.
3. Enrollments in engineering programs are steadily increasing.
4. Engineering Management is the fastest growing program in Engineering and considered as a large graduate program on campus.

C. Program Changes and Needs

With a successful search that is underway we will have a total of 10 Engineering faculty.

Curriculum has been modifies to respond to assessment data collected and analyzed.

The name change of the Department of Engineering to School of Engineering has been

approved. This change will create the appropriate structure for accreditation of various majors under engineering.

Course prefixes have been modified to reflect independent majors in C.E. and I.E and C.M. programs.

A proposal for development of a Civil Engineering program has been developed and we hope that it goes through the approval process this year.

2. SUMMARY OF ASSESSMENT (about 1 page)

A. Program Student Learning Outcomes

B. Program Student Learning Outcome(s) Assessed

For engineering we are assessing every program outcome on a yearly base. We have developed a schedule for yearly assessment of these outcomes

C. Summary of Assessment Process

The assessment activities are as follows:

The courses have been linked to outcomes.

An assessment report by the faculty teaching each course is generated.

Annual surveys of graduating seniors, employers, and alumni to assure that our curriculum adequately prepares students for employment have been conducted.

We summarize all these reports and present the summary to our Industry Advisory Board that regularly meets in June of each year. The board members suggest program modifications based on the results of assessment. The board includes faculty, student representatives, alumni representatives and industry members.

We have used the data for continuous improvement.

D. Summary of Assessment Results

Each fall, curriculum committee (all IE faculty) evaluates/analyzes the assessment data collected using the above-mentioned tools and prepares recommendations for revision/improvement. The results of the assessment are also presented and discussed at the IAB meeting. The faculty responsible for each course implements curricular changes. The chair and faculty ensure the implementation of all approved changes. The faculty has decided to use 70 percent or better as

the target achievement rate. Achievements significantly below this or consistent low levels would warrant corrective actions. Naturally, the statistical variation of this type of data, especially with sometimes small numbers of respondents, means that occasional ups and downs are expected.

The primary direct assessment of program outcomes A-K is obtained from the Faculty Self-Assessment forms which are based on combinations of exam questions, course projects, presentations and laboratories for each course that includes those program outcomes. The mapping of program outcomes to courses is shown in Table 5.5. In this way multiple measures from multiple faculty and from multiple courses are combined to get an overall assessment of each of the outcomes. These are presented in Table 4.4, Program Outcome Assessment Scores.

Table 4.4 Program Outcome Assessment Scores 2010 to 2014

O u t c o m e s	Year	2010-2011	2011-2012	2012-2013	2013-2014
	A	74.2	74.9	71.8	73.4
	B	80.0	90.0	95.0	91.0
	C	78.0	82.9	82.6	82.0
	D	77.5	77.5	79.3	81.8
	E	74.4	86.0	81.5	76.2
	F	77.5	77.5	83.8	81.0
	G	81.6	83.3	87.5	76.4
	H	75.0	75.0	91.3	80.0
	I	82.5	82.5	82.1	80.6
	J	84.8	82.3	82.0	89.1
K	83.5	87.4	82.2	77.9	
IE	91.0	92.5	95.0	89.0	

A sample of program changes implemented by faculty:

Term Change was Implemented	Type of Change	Reason for Change
Spring 2014	Modified INDE/Stat 3602 Probability and Statistics for Engineers II, to emphasize design of experiments with applications as the main focus of the course, which is now taught by engineering faculty	Assessment data indicated low confidence of the students in their knowledge of design of experiments. We expect their confidence will improve.
Winter 2014	INDE 3140 Engineering Economy, offered in separate undergraduate and graduate sections	Better service to undergraduate students based on faculty input.
Fall 2014	INDE 4200, Systems Simulation, separate graduate and	Reducing class size and concentrating on undergraduate students.

	undergraduate sections offered. Emphasis on collaborating closely with industry, assigning real world projects. Work with IT services to improve software performance.	Enhance students' understanding of the power of simulation by solving real problems. Faster/more reliable software operation allows students faster feedback and more design iterations
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3. STATISTICAL DATA (about 1 page)

Planning and Institutional Research produce program statistics annually in standard format. These statistics will be attached to the Annual Report of the Program Unit. This statistical document is expected to be approximately one page long and will contain the same data as required for the five-year review including student demographics of majors, student level of majors (e.g. Juniors, Seniors), faculty and academic allocation, and course data.

**California State University, East
Bay
APR Summary
Data
Fall 2009 -
2013**

Engineering					
	Fall Quarter				
	2009	2010	2011	2012	2013
A. Students Headcount					
1. Undergraduate	152	149	172	217	223
2. Postbaccalaureate	4	3	1	0	0
3. Graduate	85	92	97	70	86
4. Total Number of Majors	241	244	270	287	309
	College Years				
	08-09	09-10	10-11	11-12	12-13
B. Degrees Awarded					
1. Undergraduate	13	7	11	12	19
2. Graduate	5	23	18	30	32
3. Total	18	30	29	42	51
	Fall Quarter				
	2009	2010	2011	2012	2013
C. Faculty					
Tenured/Track Headcount					
1. Full-Time	4	5	5	6	7
2. Part-Time	0	0	0	0	0
3a. Total Tenure Track	4	5	5	6	7
3b. % Tenure Track	100.0%	100.0%	83.3%	85.7%	77.8%
Lecturer Headcount					
4. Full-Time	0	0	0	0	0
5. Part-Time	0	0	1	1	2
6a. Total Non-Tenure Track	0	0	1	1	2
6b. % Non-Tenure Track	0.0%	0.0%	16.7%	14.3%	22.2%
7. Grand Total All Faculty	4	5	6	7	9
Instructional FTE Faculty (FTEF)					
8. Tenured/Track FTEF	2.3	4.4	3.6	6.0	5.2
9. Lecturer FTEF	1.2	0.2	0.4	0.5	0.6

10. Total Instructional FTEF	3.6	4.6	4.1	6.5	5.8
Lecturer Teaching					
11a. FTES Taught by Tenure/Track	56.7	84.3	80.5	82.7	83.7
11b. % of FTES Taught by Tenure/Track	70.0%	91.3%	78.4%	87.8%	77.7%
12a. FTES Taught by Lecturer	24.3	8.0	22.1	11.5	24.0
12b. % of FTES Taught by Lecturer	30.0%	8.7%	21.6%	12.2%	22.3%
13. Total FTES taught	80.9	92.3	102.7	94.1	107.7
14. Total SCU taught	1214.0	1384.0	1540.0	1412.0	1615.0
D. Student Faculty Ratios					
1. Tenured/Track	24.3	19.2	22.1	13.7	16.2
2. Lecturer	19.8	38.1	50.4	23.8	39.3
3. SFR By Level (All Faculty)	22.7	20.0	25.2	14.5	18.6
4. Lower Division	17.5	11.9	25.8	15.9	16.5
5. Upper Division	29.3	21.8	23.4	14.2	17.4
6. Graduate	19.1	22.5	27.0	14.4	21.9
E. Section Size					
1. Number of Sections Offered	15.7	21.9	21.8	26.6	28.8
2. Average Section Size	22.9	20.0	25.1	20.6	21.6
3. Average Section Size for LD	21.0	21.5	33.3	27.0	23.8
4. Average Section Size for UD	23.5	13.8	15.5	18.5	19.1
5. Average Section Size for GD	22.8	26.2	42.3	19.4	24.5
6. LD Section taught by Tenured/Track	1	4	3	4	5
7. UD Section taught by Tenured/Track	7	12	12	12	16
8. GD Section taught by Tenured/Track	7	9	9	12	10